

REMARKS

Claims 1-3, 9, 26, 27 and 29 are pending. Claims 1, 2, 9, 26 and 27 are amended and claims 4-8, 10-25, 28 and 30-31 are cancelled without prejudice. Applicants submit that the amendments do not add new material to the current Application. With respect to independent claims 1 and 26, the claims were amended to include features of originally filed dependent claims. The other amendments were made to accommodate the change in the independent claims. No amendment made is related to the statutory requirements of patentability unless expressly stated herein. No amendment made is for the purpose of narrowing the scope of any claim, unless Applicants argue herein that such amendment is made to distinguish over a particular reference or combination of references.

Claims 1-3, 9, 26, 27 and 29 are patentable over Ma (U.S. 6,407,435) under 35 U.S.C. 102(e). More specifically, Ma fails to teach or suggest forming a gate dielectric including hafnium oxide and zirconium oxide adjacent to the hafnium oxide, as stated in (amended) independent claims 1 and 26. Ma only teaches using a hi-k material (hafnium oxide or zirconium oxide) with an interposer material (aluminum oxide, aluminum nitride, silicon nitride, or silicon dioxide). (Column 4, lines 32-46 and column 5, lines 52-60). Ma fails to teach or suggest using both hafnium oxide and zirconium oxide as part of a gate dielectric. Instead, all of Ma's teachings teaches using one or the other. For at least this reason, Ma fails to teach or suggest all features of independent claims 1 and 26. Thus, claims 3, 9, 26, 27 and 29 are patentable over Ma (U.S. 6,407,435) under 35 U.S.C. 102(e) for the above reason.

Claims 3 and 9 are patentable over Haukka (U.S. 2001/0013629) under 35 U.S.C. 102(e). Like Ma, Haukka fails to teach or suggest forming a gate dielectric including hafnium oxide and zirconium oxide adjacent to the hafnium oxide, as stated in (amended) independent claim 1. Like Ma, Haukka teaches using hafnium oxide or zirconium oxide in the alternative and not the two materials together in a gate dielectric. (Paragraph [0007]). For at least this reason, Haukka fails to teach all features of claims 3 and 9, which depend from claim 1. Therefore, claims 3 and 9 are patentable over Haukka under 35 U.S.C. 102(e).

Applicants have reviewed all new prior art of record and submit that none of the prior art teach or suggest forming a gate dielectric including hafnium oxide and zirconium oxide adjacent to the hafnium oxide, as stated in all pending independent claims. Believing to have responded to every issue raised by the Examiner in the last communication mailed, Applicants believe the present Application is currently in a condition of allowance. Applicants earnestly solicit allowance of all pending claims. Please contact the practitioner listed below if there are any issues.

Respectfully submitted,

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